WESTERN RURAL DEVELOPMENT CENTER

Rural Connections

CONNECTING 13 WESTERN STATES AND 4 U.S. TERRITORIES

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Director's Message

In the last few years, wildfires in the western U.S. have caused hundreds of millions of dollars in damage to homes, private property, and a loss of habitat as well as grazing land for ranchers living adjacent to public lands caused by wildfires.

This newsletter focuses on a very important issue in the Western United States, wildfires. The last few years have seen hundreds of millions of dollars in damage to homes, private property, and a loss of habitat as well as grazing land for ranchers living adjacent to public lands. Given the importance of this issue we asked experts from across the West to share their research and experience about the causes of increased fires and what suggestions they have for citizens and land managers when it comes to living with wildfire danger.

In the first article, Professor Mark Brunson from Utah State University shares his research on citizen's response to the increased size and destruction by wildfires. He suggests that two factors have converged to cause an increase in wildfire size and significance. These are invasions of sage-brush-dominated rangelands by non-native grasses such as cheatgrass and the expansion of woodlands dominated by junipers and pinyon pines. His research focuses on the social acceptability of different management options for Great Basin rangelands.

The next article discusses wildfire risk and home purchase decisions. Champ et al., found that 67% of home buyers purchasing homes in an area at risk of wildfires did not know they were purchasing homes in an area where they might be in the line of a wildfire. They also found that a majority of their respondents in Colorado had not owned a home in a fire-prone area before. These home buyers, through their home buying preference of living in a wildfire prone areas, are a major contributor to increasing fire suppression costs in the rural West. Their research points to new educational efforts as a way to increase the knowledge of locals in wildfire prone areas.

In addition to the original loss of grazing land and the loss of private homes, wildfires are having a detrimental impact on sagebrush rangelands. Summer Olsen writes on research that will provide land managers with improved information to make decisions about restoring sagebrush rangelands. Her report on the SageSTEP program illustrates that by working across agencies and state boundaries it may be possible to lessen the expansion of cheatgrass.

M.D.R. Evans and K. Rollins provide insight into pre-emptive vegetation management which involves the removal of accumulated fuels from the landscape. They argue that to allocate resources between restoration and preservation it is necessary to estimate the values of each of these investments.

As these researchers from universities and federal and state agencies demonstrate, it is possible through regional collaboration and local input to develop models to lessen the impact of wildfires and to also reduce the possibility of larger and more destructive wildfires in the West. Through collaboration and a regional focus these researchers are helping prepare for the future.

On another topic, this is my last column as director of the Western Rural Development Center. I am now moving on to focus on research dealing with rural development and teaching the next generation of those who will continue the long legacy of the WRDC. It has been a very sincere pleasure to interact with many of you over the years and my expectation is that our paths will continue to cross as I continue to conduct research on rural places and work with rural people on issues pertinent to their local lives.

It is with a great deal of pleasure that I introduce the new WRDC director, Dr. Don Albrecht. Don has spent over twenty years at Texas A&M University after leaving his home in Utah. He has a very real interest in working with university faculty and rural people as they strive to create a positive future for themselves and their children. I hope you will welcome Don as you have welcomed and encouraged me in the role of director.

Until our paths cross again.

John C. Allen

IN THIS ISSUE...

Gauging the Acceptability of Fuels Management: A Matter of Trust

By Mark Brunson

Wildfire is an increasingly daunting issue for Western communities. The effects of fire on homes and livelihoods is increasing throughout our region as more and more people choose to live adjacent to fire-susceptible landscapes such as national forests, BLM lands, ranches, and other lightly developed areas.

Meanwhile, the National Interagency Fire Center reports that the number of wildland acres burned nationwide each year has risen steadily since the 1990s, even though the total number of fires has actually decreased (Figure 1). In other words, wildfires are getting bigger and more destructive.

The Great Basin is a region where this trend is especially noticeable. In 2007, for example, the Milford Flat wildfire in west-central Utah was the largest in that state's history at more than 350,000 acres, but even that was dwarfed by the Murphy Complex fires that burned over 1,000 square miles just north of the Nevada-Idaho border. Although these fires burned sparsely-settled rangelands, they nonetheless killed livestock and destroyed buildings, resulting in devastating losses to those affected, and filled downwind urban areas with smoke that diminished air quality and increased health care costs for people who suffer lung problems.

Several factors have converged to cause the increase in wildfire size and significance. Two of the most important in the Great Basin are ongoing invasions of sagebrush-dominated rangelands by non-native grasses such as cheatgrass and the expansion of woodlands dominated by junipers and pinyon pines. Both of these processes have increased the amount and flammability of dried plant materials ("fuels") that can accumulate in rangelands. The situation is most apparent on lands managed by the federal government.

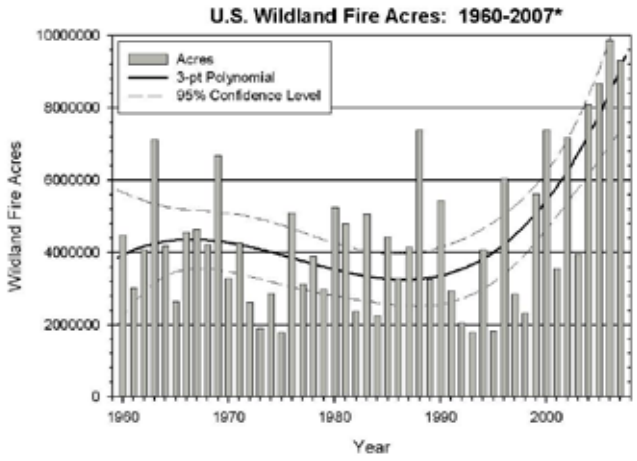
Public land managers have tools that can reduce the risk but sometimes there are barriers to using them. One significant obstacle can be citizen opposition to activities such as shrub mowing, prescribed burning, tree-felling and herbicide application. Federal law allows private citizens and interest groups to file administrative appeals or lawsuits to block management activities they believe are harmful to the public's lands. Therefore, it's important for managers to know how citizens perceive alternative practices for wildland fuels reduction, and why they feel that way. As part of the SageSTEP research project that is evaluating the various effects of alternative practices for rangeland restoration and wildfire risk-reduction (see related story, p. 7), social scientist Bruce Shindler of Oregon State University and I have been studying the social acceptability of different management options for Great Basin rangelands.

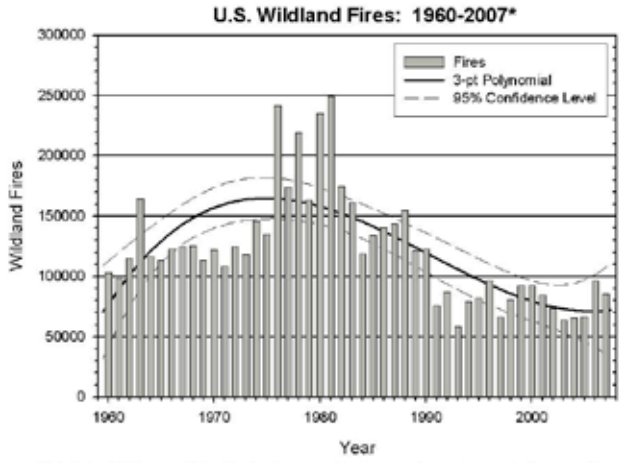
Our research on citizen responses to management options for sagebrush entails several complementary studies. The first two involved interviews of members of significant stakeholder groups as well as land managers themselves. We also sent a mail survey to randomly selected households in communities throughout the Great Basin. Subsequent and ongoing research activities will include additional surveys of specially targeted populations such as grazing permit-holders and citizens affected by 2007 wildfires, analysis of statements about range management made in interest group literature and legal documents, and assessment of how citizens' attitudes and acceptance are affected by information about wildfire risks and rangeland ecology.

Surveys of Great Basin Citizens

We mailed surveys to randomly selected households in six different parts of the Great Basin: the cities of Boise, Reno, and Salt Lake City, and rural areas in Elko and White Pine counties, Nevada; Lake and Harney counties, Oregon; and Beaver and Millard counties, Utah. The urban areas were chosen because they are the region's largest population centers; the rural areas consisted of adjacent counties of roughly equal combined populations (about 18,000 people according to the 2000 Census) that are also locations for two or more SageSTEP experimental treatment sites.

We mailed 600 surveys to each of the six study areas, for a total of 3,600 surveys, and received 1,345 valid responses. After accounting





*2007 wildfire activity includes preliminary data through December 28th

Figure 1. Trends in the number and size of wildfires in the U.S. since 1960. (Source: National Climatic Data Center, U.S. Department of Commerce)

for the 636 surveys that were undeliverable, the overall response rate was forty-five percent with a range from forty percent (Reno) to fifty-five percent (Millard/Beaver, Utah). For purposes of this article, we have combined results for the three cities and the three rural areas.

The surveys found that overall Great Basin citizens believe their region's environment is moderately healthy. However, they do recognize threats to sagebrush ecosystems, especially from development, invasive species, OHVs, impacts to riparian systems, overgrazing, and wildfire (Figure 2). Interestingly, rural residents are more likely to perceive threats to rangeland health that are attributable to ecological processes such as juniper encroachment, wild horse overpopulation or overly dense sagebrush, while urban residents are more likely to attribute threats to human activities such as development, off-highway vehicle use or poorly managed livestock grazing.

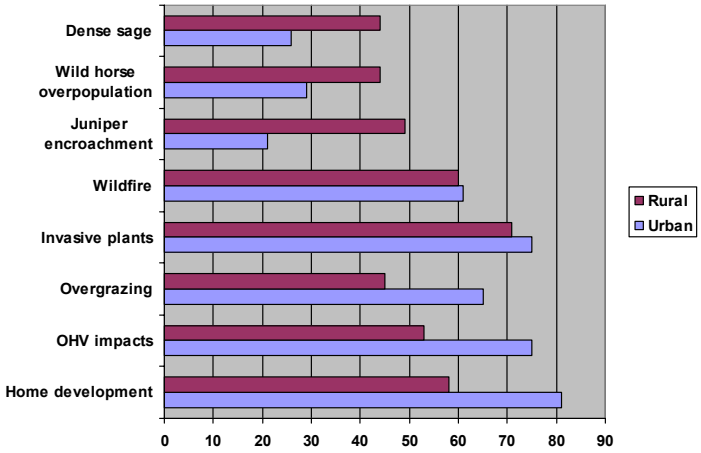


Figure 2. Perceived threats to rangelands (percent agreement of rural and urban citizens).

Public acceptance is relatively high for managing rangeland conditions via prescribed burning, grazing, thinning, or mowing (Table 1). If we consider responses of citizens who offer at least minimal levels of acceptance – i.e., those who believe a practice can be used widely and those who believe it should be used sparingly – a majority of citizens in both rural and urban areas can support some use of these practices. However, this is not the case for "chaining" (i.e., removing juniper and pinyon trees by dragging a heavy chain between two bulldozers) or spraying herbicides, both of which are minimally acceptable to rural residents but not to urban residents, who make up more than three-fourths of the population in the Great Basin.

	Livestock grazing		Prescribed burning		Mowing shrubs/grasses		Felling woodland trees		Chaining woodland trees		Spraying herbicides	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Legitimate tool – use wherever managers see fit	47	65	39	41	27	35	22	43	11	31	11	24
Use infrequently only in carefully selected areas	31	18	45	40	35	35	42	31	24	33	29	40
Should not use due to negative impacts	8	5	6	8	11	8	14	9	24	11	27	12
Should not use – unnecessary	5	4	4	5	9	12	9	9	22	13	18	17
Don't know	10	9	7	6	19	11	14	9	19	12	16	9

Table 1. Levels of acceptability of different practices that may be used to reduce wildland fuel loads and wildfire risk.

Perhaps more significant is what happened when respondents were asked whether they were confident in federal agencies' ability to implement these practices successfully. These answers were less positive (Figure 3). Trust levels were significantly lower than acceptability levels for all six practices. Trust levels did not differ between urban and rural residents except in the case of prescribed fire, where confidence in agencies was lower among rural residents (who are most likely to be affected if a prescribed fire gets out of control).

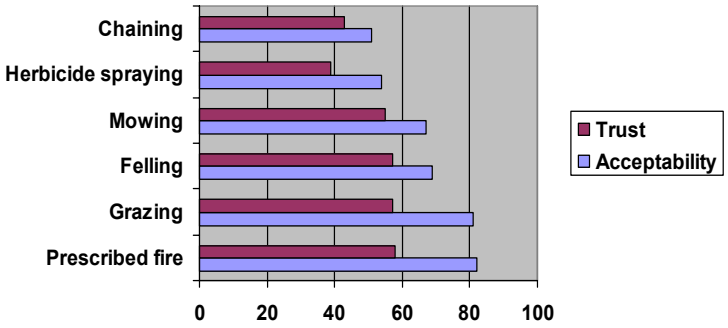


Figure 3. Percentage of citizens indicating acceptance of management practices vs. trust in land managers' ability to implement those practices (rural and urban results combined for display purposes).

Several factors have converged to cause the increase in wildfire size and significance. Two of the most important in the Great Basin are ongoing invasions of sagebrush-dominated rangelands by non-native grasses such as cheatgrass and expansion of woodlands dominated by junipers and pinyon pines.

Gauging the Acceptability of Fuels Management: A Matter of Trust -- continued

Stakeholder Interviews

Similar patterns of response were found when members of our research team interviewed active participants in range management and policy activities in four broad categories of interest group: livestock grazing, recreation (including hunting and OHV use), environmentalist, and research/extension. Again, we found high recognition among the stakeholder groups of threats to sagebrush ecosystems and solid support for the concept of sagebrush steppe restoration in principle. Most interviewees saw a place for any restoration method in the manager's "toolkit," though a few from the environmental community expressed misgivings about herbicide and mechanical shredding ("Bullhog") treatments. But again, interviewees clearly expressed concerns about the capacity of the land management agencies to make it happen.

Among the issues raised by interviewees as influences on trust in agencies were: levels of funding available to implement fuels-reduction treatments; ability to keep pace with increasing wildfire and non-native plant invasion processes; interference from political forces both in constituency groups and in Washington, D.C.; and agencies' willingness to incorporate local knowledge and concerns into planning for restoration treatments.

When we interviewed persons within the agencies themselves, we heard many of the same feelings about threats to sagebrush ecosystems and potential impediments to successful restoration, although, not surprisingly, the managers expressed greater confidence in their agencies' ability to achieve fuels-reduction and restoration goals. Another difference between managers' and stakeholders' views pertained to the scale of management action, with stakeholders preferring smaller "targeted" treatments that would be less likely to have widespread negative impacts if something went wrong, while land managers advocate larger landscape-scale projects that more closely match the scales at which ecosystem processes actually occur. Since citizens' wariness of large-scale projects are largely a way to minimize risk and uncertainty, it may be valuable for agencies to try smaller projects at first and gradually build up a reservoir of trust among interest groups and affected citizens.

Conclusions

Citizens throughout the Great Basin region recognize that wildfire represents a significant threat to the health of rangelands as well as to human communities and livelihoods. In general they agree that land managers should have the option to use most tools in the management "toolkit," although residents of the region's cities as well as environmental activists are concerned about negative impacts of herbicides and some forms of mechanical removal of woodland trees. However, there is a significant gap between the acceptability of management practices in theory and the confidence that citizens have in land managers' abilities to use those practices safely and effectively. Perhaps this gap simply reflects the widespread tendency of Westerners – especially in rural resource-dependent communities – to view the federal government with a wary eye. But since most citizens are willing to accept the use of multiple practices on a small scale, opportunities exist for land managers to build citizens' confidence in their activities while gradually reducing the risk of wildfire to the Great Basin's most susceptible communities.

Acknowledgments

This is Contribution Number 10 of the Sagebrush Steppe Treatment Evaluation Project (SageSTEP), funded by the U.S. Joint Fire Science Program (JFSP Grant #05-S-08). The research described here was conducted by the author with Dr. Bruce Shindler of Oregon State University.

About the author

Mark Brunson is professor of Environment and Society at Utah State University in Logan, Utah.

Citizens throughout the Great Basin region recognize that wildfire represents a significant threat to the health of rangelands as well as to human communities and livelihoods.

Related Reading

The following articles offer a more detailed description of the concept of social acceptability as it has been applied to wildfire and fuels management in the West:

Brunson, M.W., and J. Evans. 2005. Badly burned? Effects of an escaped prescribed burn on social acceptability of wildland fuels treatments. Journal of Forestry 103 (April/May): 134-138.

Brunson, M.W., and B.A. Shindler. 2004. Geographic variation in social acceptability of wildland fuels management in the western U.S. Society and Natural Resources 17:661-678.

Toman, E., B. Shindler and M. Brunson. 2006. Fire and fuel management communication strategies: Citizen evaluations of agency outreach programs. Society and Natural Resources 19:321-336.

Wildfire Risk and Home Purchase Decisions

By Patricia Champ, Geoffrey Donovan, Christopher Barth

In the last 20 years, wildfire damages and the costs of wildfire suppression have risen dramatically. This trend has been attributed to three main factors: climate change, increased fuel loads from a century of wildfire suppression, and increased housing development in fire-prone areas. There is little that fire managers can do about climate change, and current fuel management budgets struggle to keep pace with fuel accumulation, let alone correct it. Thus, if wildfire costs and damages are to be controlled, efforts need to focus on mitigating wildfire risk near housing developments in fire-prone areas.[1] However, little is known about how and whether home buyers consider wildfire risk when they are purchasing a home in a fire-prone area.

The Colorado Study

We recently conducted a study in Colorado Springs, Colorado, to provide some insight into the role of wildfire risk in home purchase decisions. The study involved two phases. First we used home-sales data to understand how wildfire risk affected the housing market before and after a wildfire education campaign was launched by the Colorado Springs Fire Department. We were able to look at the effect of overall wildfire risk and the factors that influence wildfire risk: vegetation and building materials, for example. In the second phase of the study, we surveyed homeowners who had purchased their home after the Colorado Springs Fire Department's education campaign was launched to find out more about the role of wildfire risk in their purchase decision.[2]

In 1999, the Colorado Springs Fire Department began a unique project to rate the wildfire risk of 35,000 parcels of land in the wildland-urban interface and make the information available on a website, FireWise. They believed that previous education efforts which provided more general information were ineffective, and that parcel-level wildfire risk assessments would provide the specific information needed to change homeowners' behaviors.

For each parcel, up to 25 variables were used to calculate an overall wildfire risk rating (low, medium, high, very high, or extreme). Although up to 25 variables are used, six variables largely determine a parcel's wildfire risk rating. These are, in order of importance:

- Proximity to dangerous topography
- Roof material
- Composition and abundance of combustible vegetation around the house
- Siding material
- Average slope of the parcel and defensible space around the home

In June 2002 the fire department posted the parcel-level wildfire risk ratings on the FireWise website. The Colorado Springs Fire Department's wildfire risk ratings were combined with home sales data to investigate whether providing the wildfire risk ratings on the Web influenced the local housing market. The modeling accounted for other home attributes such as location, house size, and age.

We found that overall wildfire risk ratings had a positive and significant relationship with home sales price before the website was launched in June 2002. In other words, homes with higher overall wildfire risk ratings sold for more than homes with low overall wildfire risk ratings. This does not imply that home buyers sought out homes that are more likely to burn during a wildfire. Rather, it means that home buyers have a strong preference for amenity values that are positively correlated with wildfire risk.

For example, living on top of a ridge can increase wildfire risk, but it also gives better views. After the education campaign was launched, there was not a statistically significant relationship between overall wildfire risk rating and sales price. This result suggested that once homeowners were made aware of the risk, wildfire risk and amenity values roughly balanced out, a result that is consistent with other studies that have looked at the effect of wildfires on the housing market.

When we evaluated the effect of the individual variables that determine wildfire risk, we found that:

- Having a wood roof increased the sales price prior to the website's launch and decreased the sales price after the launch of the website;
- Wood siding had no effect on sales price prior to the website and had a negative effect after the website;
- Living close to dangerous topography, such as a ridge, increased sales prices both before and after the website;
- Finally, dense vegetation near the home had no effect on sales price before or after the website.

It appears that the education campaign was effective at changing people's preferences for flammable building materials. However, willingness to pay a premium for living near dangerous topography was not affected.

Given the interesting results of the first phase of the study, we decided to implement a mail survey to a random sample of the individuals who purchased their homes in the Colorado Springs wildland-urban interface in a two-year period after the website was launched. The

Wildfire Risk and Home Purchase Decisions -- continued

results showed that wood roofing and wood siding were rated by survey respondents as undesirable characteristics, whereas proximity to the foothills and location on a ridge were rated as desirable. Dense vegetation was rated more undesirable than desirable. However, a more complicated story unfolds when we consider responses to survey questions about the role of wildfire risk in the home purchase decision. Only twenty-seven percent of the survey respondents realized the house they were purchasing was in an area at risk of wildfire before making an offer on the home.

Furthermore, sixty-seven percent did not realize they purchased in an area at risk of wildfire until after they moved into the home. Very few of the survey respondents (less than one percent) had accessed the Colorado Springs Fire Department's FireWise website during the home purchase process. However, more residents eventually accessed the website, as sixteen percent of the survey respondents said they had visited the website.

We would not expect home buyers to know the wildfire risk rating of a particular home if they had not accessed the Colorado Springs Fire Department's FireWise website, and indeed a comparison of actual wildfire risk to homeowners' perceived wildfire risk suggests that survey respondents underestimated the overall wildfire risk rating of their home. In particular, twenty-one percent of the respondents thought they had low ratings when in fact only one percent did and only thirteen percent thought they had extreme or very high wildfire risk rating when actually twenty-seven percent did. However, actual wildfire risk ratings were correlated with perceived wildfire risk ratings, suggesting homeowners systematically underestimated the risk rating.

It is apparent that most survey respondents did not have much knowledge of wildfire risk and most (seventy-five percent) also said they were not concerned about wildfire risk when they purchased their home. Those who were concerned about wildfire risk when they purchased their home had good reason for concern, as they were more likely to purchase homes with extreme or very high wildfire risk ratings.

We might expect previous experience with wildfire to influence home buyer concern about wildfire risk. Most (sixty-five percent) of the survey respondents had not owned a home in a fire-prone area prior to moving into their current residence in Colorado Springs. Although many (forty-two percent) of the survey respondents knew someone who was evacuated from her home due to a wildfire, only eighteen percent knew anyone whose home had been damaged or lost due to a wildfire. Survey respondents who had previously owned a house in a location at risk of wildfire were more likely to be concerned about wildfire risk when they purchased their current home. Knowing someone who was evacuated from his/her home due to a wildfire or knowing anyone whose home had been lost or damaged due to a wildfire did increase concern about wildfire risk.

These results suggest that personal experience is more strongly related to concern about wildfire risk during the home purchase process than knowledge of others' experiences with wildfire. Perhaps this is why despite much media coverage of wildfires, so few individuals were aware of or concerned about wildfire risk when they purchased their home.

Conclusion

This study provided some interesting insights into wildfire risk and home purchase decisions. Although the Colorado Springs Fire Department's FireWise program and the parcel-level wildfire risk ratings did not specifically target individuals moving into the area, the program appears to have changed home buyer preferences for some home characteristics that are related to wildfire risk. Nevertheless, home buyers did not seem to be very knowledgeable or concerned about wildfire risk. And while they underestimated the wildfire risk rating of their homes, perceived and actual wildfire risk ratings were positively correlated. As noted earlier in this article, migration to fire-prone areas is a major contributor to increasing fire suppression costs. Educating home buyers could have significant financial payoffs for the home buyers themselves and the taxpayers who fund fire suppression efforts. We conclude that providing parcel-level information about the wildfire risk that targets individuals moving into fire prone areas might be an effective approach to education.

Endnotes

1. According to the Office of Inspector General, the cost of protecting private property from wildfires constitutes between 50 to 95 percent of all firefighting costs in recent years.

2. The details of the study are summarized in Donovan, Champ, and Butry (2007a,b) and Champ, Donovan and Barth (forthcoming 2008).

References

Champ, P.A., G.H. Donovan, C. Barth. Forthcoming. "Home buyers and Wildfire Risk: A Colorado Springs Case Study." Society and Natural Resources.

Donovan, G., P.A. Champ, D. Butry. 2007a. "The Impact of Wildfire Risk on Housing Price: A Case Study from Colorado Springs." Land Economics 83(2):217-233.

Donovan, G., P.A. Champ, D. Butry. 2007b. "Measuring the efficacy of a wildfire education program in Colorado Springs." Journal of Emergency Management 5(3):33-37.

About the Authors

Patricia Champ is an economist with the U.S. Forest Service who studies nonmarket valuation methods and social and community aspects and effects of wildfires, among other things. Her research on policy and institutions has yielded publications for Land Economics, Environmental and Resource Economics, and other journals. She is also a member of Western Economics Association International and Association of Environmental and Resource Economists.

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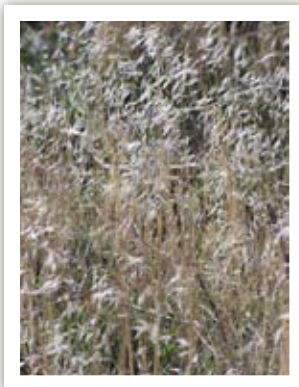
Rangeland Fires and Cheatgrass: Values at Risk and Support for Preservation

By M.D.R. Evans and K. Rollins



The high desert sagebrush ecosystems of the Great Basin evolved with fire. However, the introduction of cheatgrass (t. bromus), a highly flammable invasive annual grass, has contributed to the increased intensity and frequency of wildfires we have seen in recent years. Cheatgrass-fueled fires often kill native perennials, which creates openings for further cheatgrass expansion. Winters with more moisture than usual result in more cheatgrass and increased fire risk. Over time the result is ever larger areas dominated by cheatgrass and other invasive weeds that burn with greater frequency, and increasingly severe fire seasons.

A cheatgrass-dominated ecosystem can support neither native vegetation nor the animals and birds that require sagebrush habitat. Prior to the spread of cheatgrass, wildfires occurred in intervals of roughly 30 to 110 years, depending on the area in the Great Basin. Where cheatgrass dominates, fires now occur as often as every 3 to 5 years. Ecologists predict that the amount of cheatgrass in the Great Basin is enough that if nothing is done, eventual loss of the sagebrush ecosystem is unavoidable.

What can be done?

After an area no longer can support native vegetation, restoration is the only available option. This requires reseeding and planting young native plants, which are often in short supply. Restoration is very expensive, and in the harsh conditions of the Great Basin, restoration efforts are effective less than half of the time.

An alternative is to preemptively manage vegetation to prevent loss of the sagebrush ecosystem. Pre-emptive vegetation management involves removal of accumulated fuels from the landscape and suppression of cheatgrass. These methods include use of prescribed burns, herbicides, mechanical removal of fuels, and planting of non-native, but non-invasive plants to compete with cheatgrass. Vegetation management is successful if the landscape's ability to support native vegetation is not diminished after the next fire.

Ecologists believe that as the amount of cheatgrass increases and perennial native grasses decrease, a threshold is reached where preemptive land management treatments to reduce cheatgrass are not effective. One goal of the SageSTEP project is to determine where this threshold is so that scarce resources available for land management can be allocated to where they will do the most good. Preemptive vegetation management strategies can be viewed as investments to preserve intact sagebrush ecosystems so that we can avoid the need for costly restoration.

To distribute available resources between restoration and preservation, we need to be able to estimate the values of these investments. One of the main purposes of the economics work on this project is to determine the value of efforts to prevent further losses. One way to think of the value of preservation is to measure the cost of inaction.

How much would people stand to lose if these ecosystems undergo irreversible changes from the traditional sagebrush dominated plant communities and their associated plants, animals, birds, reptiles and other species that are integral parts of this ecosystem?

What is the value to society of a natural sagebrush landscape versus the likely alternative if nothing is done: an invasive weed-infested fire prone landscape that can no longer support native plants and animals? There are many public policy goals important to the general public (highways, defense, education) which have unfortunately limited funds. When setting priorities on these funds, values that are not easily measured with dollar units tend to be difficult to compare to other important uses.

Accordingly, to be able to make relevant comparisons and bring to the table the notion of investing in preserving these areas, economists have developed methods to translate people's values for nature into dollar terms to facilitate comparison with other demands on the public purse.

Methods

These methods are based on the following concept. If people state that they are willing to pay a given amount to achieve a specific goal, then we can assume that the value of achieving that goal is worth at least that much to them. We designed a set of questions that presented trade-offs in terms of annual dollar costs to their households to establish a program to implement preemptive vegetation management to prevent further losses to the sagebrush ecosystem. We tested these questions in a pilot survey of residents of the Great Basin, weighted toward rural residents. Results from this question together with demographic characteristics of the respondents give us insights about the value of preserving the sagebrush ecosystem to diverse social groups. We also wanted to know if providing people with information about the relationship between cheatgrass, wildfire and the sagebrush ecosystem would affect their willingness to pay. To find out, we provided extra information on half of the surveys. We also wanted to determine if people can distinguish between preservation and restoration, so half the surveys ask about willingness to pay for preservation, while the other half ask about restoration.

To take into account people's uncertainty, they were given five options to indicate their willingness to pay a variety of annual dollar amounts: "definitely yes," "probably yes," "probably no," definitely no," and "not sure."

Results

Using the "definitely yes" answers alone, we find that people are willing to pay $71 per household annually for a land management program to protect the sagebrush ecosystem from losses to wildfire and invasive weeds. Including the "probably yes" responses increases this amount to $114.

People are willing to pay $26 more per household annually to preserve existing areas than to restore areas that have already lost their ability

Rangeland Fires and Cheatgrass: Values at Risk and Support for Preservation -- continued

to support native vegetation. This implies that there is more value and likely more public support for preventing losses than for restoration after losses occur. This is contrary to current policy practices whereby there is less preventative funding available relative to funding for restoration after losses have already occurred. More effort on treatments before lands are degraded is likely a good investment, especially given the high costs and low success rates of restoration.

Demographic information from the survey can be used in estimating willingness to pay to understand differences among groups in society. For example, people who work in agriculture are more likely to support vegetation management efforts by a substantial margin: $38 more than the average respondent for those who say "definitely yes", and $61 per year when we add in the "probably yes" responses. However, people who say that forage for livestock is an important rangeland resource are willing to pay slightly less than other people who work in agriculture, by about $12 per year, but they are still ahead of the general public by about $26. In contrast, people who stated that "grazing is a threat to rangeland ecosystems" indicate that they are definitely willing to pay $29 more than the average of $71 per year, and adding in the "probably yes" responses, they are willing to pay $47 more per year than the average.

We find that more highly educated people are more likely to support vegetation management efforts, but that their increased likelihood to support these programs does not translate into being willing to pay more. In contrast to the effect of formal education, when we supplied additional information to survey recipients, this did not cause people to be more or less supportive of vegetation management efforts. However, people who received added information were willing to pay substantially more per year than those who did not receive it – a $99 increase in what people say they would seriously consider paying. The information effect on the amount that people are willing to pay increases with the length of time they have lived in the Great Basin, but decreased with age. It seems that the information does not change people's minds about whether they are willing to support the effort, but for those who already have a propensity to support the effort, the added information increases how much they value these programs.

Conclusions and Future Work

Preemptive treatments are investments in preserving intact sagebrush ecosystems so that we can avoid the need for restoration. These are best done before fire and invasive weeds compromise the ecosystem. Unfortunately it is difficult to make a case for scarce resources needed to implement prevention measures when other competing uses for the same funds appear more immediate. The devastation of catastrophic wildfires attracts publicity and funds when it is often too late to invest in prevention, and more expensive and less reliable restoration is the only available option.

Expenditures on prevention are investments to preventing the high future cost of a complete conversion of Great Basin lands. Our results suggest that the value of preventing loss is higher than the perceived value gained by restoration after loss. Given this result, it would seem that a public policy that placed higher importance on prevention would not only be more consistent with public opinion and values, but it would be less costly and more likely to result in long term protection of the Great Basin sagebrush ecosystem than our current policy of reacting to losses after they occur.

Today's investments in prevention may be a small price to pay to avoid the costs of increasingly severe wildfire seasons and the loss of ecosystem benefits for the indefinite future. The values that we measured in this study would normally not be quantified by market-generated processes. By measuring them, we can bring them to the table when decisions are being made that affect the allocation of scarce resources to protecting the Great Basin and the livelihoods and quality of life of the people who care about this vast section of the Western American landscape.

We are currently extending this work to determine values for specific Great Basin ecosystem goods and services, including game and non-game wildlife, scenic beauty, recreation, air and water quality. Our methods require survey work for data collection, and we are surveying residents throughout the Great Basin. If you should receive one of our surveys, you are being asked to participate in our research. Please feel free to comment, ask questions, make suggestions, or ask for summaries of our results to date. More information about the pilot survey results that we describe here can be found in: "The 2005 Nevada Rangeland Vegetation Survey General Public Questionnaire and Survey of Responses," available for download at http://www.unce.unr.edu/publications/files/nr/2007/sp0711.pdf

About the Authors

MDR Evans is a Senior Research Fellow in the Melbourne Institute of Applied Economic and Social Research, University of Melbourne. She is a graduate of Reed College (BA) and the University of Chicago (PhD). She is currently studying the causes, consequences, and policy implications of entrepreneurship; migration; labor market preferences, values and participation; and is undertaking major programs of research on the ideology of income inequality and on bio-ethics, based on Australian and international surveys.

Kim Rollins is a professor of Resource Economics at University of Nevada – Reno, where she studies the interaction between society and environment. She has studied environmental amenities, policy, and valuation of environmental amenities in Canada, Costa Rica, and the US. In addition to academic research, she is regularly involved with projects that allow research results to be transferred to practitioners in the public and private sectors. Her projects and research results use practical policy analysis to suggest resolution to current environmental problems.

Sagebrush Steppe Treatment Evaluation Project (SageSTEP): Restoration Research with Practical Applications

By Summer Olsen

Sagebrush rangelands cover millions of acres in the Great Basin including parts of Oregon, California, Idaho, Nevada, and Utah. This land provides a variety of important services, including wildlife habitat, clean water, recreation, and economic opportunities; it also serves as the primary forage base for the western livestock industry. Healthy sagebrush rangelands are rapidly being lost due to a variety of factors including severe wildfires, woodland expansion, invasion of non-native species, urban development, and drought. This loss can have significant impacts on those who depend on the land for goods and services.

Sagebrush Steppe Treatment Evaluation Project, known as SageSTEP, is an interdisciplinary, five-year research program that is exploring ways to improve the health of sagebrush rangelands across the Great Basin. The project is funded by the federal government's Joint Fire Science Program (JFSP) and is a collaborative effort among five universities, six federal agencies, and one non-governmental organization. This study seeks to address the rapid loss of healthy sagebrush rangelands in the Great Basin due to invasion of cheatgrass (a highly flammable non-native weed), severe wildfires, and expansion of pinyon and juniper woodlands.

The purpose of SageSTEP is to conduct research that will provide land managers with improved information to make decisions about restoring sagebrush rangelands. More than 25 scientists are working in collaboration with land managers in more than 20 different offices throughout the Great Basin to implement the project. SageSTEP is a unique study that will produce new scientific findings about sagebrush steppe ecosystems as well as practical information about restoration that can be applied by managers.

SageSTEP consists of two experiments that are being conducted across a regional network of sites in sagebrush communities, one looking at sagebrush sites in various stages of cheatgrass invasion and one in sagebrush sites facing pinyon and juniper woodland encroachment. The project has 20 study sites scattered throughout the five Great Basin states, primarily on public lands. This regional network will allow scientists to understand the thresholds between healthy and unhealthy sagebrush communities over a broad range of conditions across the Great Basin.

Land management treatment options are being studied to learn how healthy and diverse plant communities can be created that will be more resilient to fire and resistant to weed invasion. Treatments at sagebrush sites invaded by cheatgrass include prescribed burning, mechanical thinning of sagebrush using a mower, and application of the herbicide tebuthiuron to thin sagebrush. Imazapic pre-emergent herbicide is being applied in half of the subplots of each treatment at sagebrush sites to assess its ability to prevent the growth of cheatgrass. At woodland sites, treatments include prescribed burning, mechanical removal of trees by chainsaw, and tree mastication using a Bull Hog™ (in Utah only). Each site also has a control plot where data are being collected but no treatment is taking place. To date treatments have been implemented at 13 of the 20 study sites, and are planned for the remaining sites this fall (2008).

Collection of baseline ecological data began in summer 2006, and data collection continued in 2007 at both treated and untreated sites. Although official data analyses have not yet begun, scientists are beginning to make preliminary observations based on what they are seeing at treated sites after one growing season, and the results are encouraging.

The following ecological data is being collected:

Vegetation and Fuels: 10-, 100-, and 1000-hour fuel samples, and various other vegetation and fuel measurements are being collected in both the understory and overstory. Non-fuel vegetation measurements will allow scientists to learn more about the types of plant communities that are likely to appear after a wildfire or management action.

Soils: Soils are being sampled for chemical analyses and soil profile descriptions. This information will tell scientists more about the effects of treatments on the availability of essential plant nutrients.

Hydrology: Rainfall simulations are being conducted on small (0.5m2) and large (35m2) plots, and measurements are being taken to help scientists better understand relationships between changes in vegetation and ground cover and runoff and erosion.

Wildlife: Wildlife data collection focuses on the effects of treatments on migratory songbirds.

Insects: Butterflies are being surveyed for biodiversity, and ants are being studied because of their importance to sagebrush steppe systems, particularly for seed dispersal and predation

Soil Moisture and Temperature Stations: Microloggers collect soil moisture and temperature data continuously at most sites.

SageSTEP is an interdisciplinary study and includes economic and social components. SageSTEP economists are studying the economic impacts of restoration activities. Economic studies include modeling impacts at ranch and regional levels, and non-market valuations of ecosystem goods and services. Social scientists are looking at public and managers' acceptance of restoration activities as well as special interest group concerns that may affect the willingness or ability of individuals and agencies to implement restoration projects.

Results of all aspects of the SageSTEP research will provide resource managers with improved information to make restoration management and wildfire risk-reduction decisions with reduced risk and uncertainty.

About the Author

Summer Olsen works as Sage STEP's Outreach Program Coordinator. She develops materials and methods to deliver project information and results to land managers and other interested stakeholders. This is Contribution Number 13 of the Sagebrush Steppe Treatment Evaluation Project (SageSTEP), funded by the U.S. Joint Fire Science Program.

SageSTEP Outreach Products

User's Guides

SageSTEP is producing a set of three 'User's Guides', one each for sagebrush ecosystems threatened by western juniper encroachment, pinyon-juniper woodland encroachment, and cheatgrass invasion The guides are intended to help both public and private landowners make more informed decisions as they consider how to apply land management treatments under a wide variety of conditions. The first guide in the series, Western Juniper Field Guide: Asking the Right Questions to Select Appropriate Management Actions was printed with support from the U.S. Geological Survey and is now available as a PDF file or hard copy. For more information, go to:
http://www.sagestep.org/pubs/userguides.html.

DVD

Restoring Sagebrush Rangelands in the Great Basin: An Introduction to Alternative Land Management Strategies. This project is funded by Western Sustainable Agriculture Research and Education (SARE) and focuses on providing information to private landowners and others who are interested in learning more about threats to sagebrush rangelands and potential restoration techniques. Distribution of the DVD is planned for summer 2008; if you are interested in obtaining a copy, please contact: summer.c.olsen@usu.edu.

Newsletter

SageSTEP News is distributed electronically approximately three times a year. The newsletter provides updates and information about the SageSTEP study, other related projects, and upcoming events. Anyone interested in being added to our e-mail list should contact summer.c.olsen@usu.edu.

Additional Websites/Publications

For a detailed report of citizen survey results go to
http://www.sagestep.org/progress/social.html.
Numerous publications are planned or in progress as part of the SageSTEP study including a Fuel Loading Guide a Guide to Stakeholder Groups. Information about these and other publications and resources are available at
http://www.sagestep.org/publications.html

Related Reading

The following articles offer a more detailed description of the concept of social acceptability as it has been applied to wildfire and fuels management in the West:

Brunson, M.W., and J. Evans. 2005. Badly burned? Effects of an escaped prescribed burn on social acceptability of wildland fuels treatments. Journal of Forestry 103 (April/May): 134-138.

Brunson, M.W., and B.A. Shindler. 2004. Geographic variation in social acceptability of wildland fuels management in the western U.S. Society and Natural Resources 17:661-678.

Toman, E., B. Shindler and M. Brunson. 2006. Fire and fuel management communication strategies: Citizen evaluations of agency outreach programs. Society and Natural Resources 19:321-336.

National Interagency Fire Center

The National Interagency Fire Center calls itself the "nation's logistical support center" when dealing with wildfire issues and prevention/management issues. For agency and firefighting personnel, this site offers information about training/qualifications, aviation and policy resources, general fire information (including maps of fire outlook and drought areas), and prevention and education links.
http://www.nifc.gov/index.html

FEMA Wildfire Guide

The FEMA guide provides user-friendly resources for a wide variety of people, but especially those who seek information on how to prepare for a wildfire. In addition, disaster relief tips and links are given along with links for communities looking to apply for assistance. Includes information specifically for rural residents.
http://www.fema.gov/hazard/wildfire/index.shtm

United States Geologic Service (USGS) Natural Hazards: Wildfires

This site gives accessible fact sheets for national wildfire information as well as abundant links to a variety of wildfire-related news items and other information sources. Also gives links to wildfire podcasts, related job postings, and resources for agency personnel or academics seeking research partnerships in the area of wildfires.
http://www.usgs.gov/hazards/wildfires/

Advanced Fire Technologies

This site provides information for citizens whose homes may be at risk from wildfires. Several links and checklists are given for defensive measures against fire damage, while including links to other sources of information and weather forecasts.
http://www.aftmonsoon.com/wildfire-resources.htm

Tribal Wildfire Resource Guide

The Tribal Wildfire Resource Guide draws from regional and national resources, policies, and programs to provide up-to-date information on wildfire planning and prevention for tribes across the United States. If you would like a hard copy or an interactive CD, please e-mail kathy@uoregon.edu or call 541-346-0687 to make your request. Please specify whether you would like a CD or hard copy and your name and mailing address.

Fire Information Toolkit

This guide provides information for homeowners, researchers and decision-makers dealing with wildfire threat or long-term issues. Different information is provided for each camp of stakeholders and plenty of additional links are given.
http://firecenter.berkeley.edu/toolkit/researchers.html

Joint Fire Science Program

Researchers and agency personnel will find this site useful and comprehensive, as it gives a wide variety of information including: recent fire science briefs and research presented in an accessible and user-friendly format. Also gives links to RFAs for prospective researchers. http://www.firescience.gov/

Cooperative State Research, Education and Extension Services (CSREES)

CSREES helps to build rural and community prosperity through research, education, and extension, much of it led by the CSREES Regional Rural Development Centers--with their many partners in the university system and in communities across the country. CSREES promotes economic and community development through national program leadership, funding for integrated research, education, and extension activities, and strategic partnerships and collaborations. Click here to visit their website for current funding opportunities.
http://www.csrees.usda.gov/ProgView.cfm?prnum=4657

Kauffman Foundation – Entrepreneurship Research Portal

A self-described "clearinghouse for understanding entrepreneurship," this site provides ample information for rural entrepreneurs. Links to information on entrepreneurship, research studies, and introductions to the latest funding and grant opportunities for entrepreneurs.
http://research.kauffman.org/cwp/appmanager/research/researchDesktop

Northwest Area Foundation

The Northwest Area Foundation is committed to helping communities reduce poverty for the long term. They work with rural, urban, American Indian and rural Latino communities in Minnesota, Iowa, North Dakota, South Dakota, Montana, Idaho, Washington, and Oregon. To learn more about the NWAF, visit their website.
http://www.nwaf.org/default.aspx

Sierra Institute

The Sierra Institute for Community and Environment is dedicated to advancing rural community well-being and sustainable ecosystems. Founded in 1993, the Institute is a non-profit research and education organization based in the northern Sierra Nevada range in the rural town of Taylorsville, California. They work locally, regionally, and nationally to bridge the thinking among people with different - and often competing - ideas about social and natural resources.
http://www.sierrainstitute.us/

Southwest Marketing Network

The Southwest Marketing Network's "purpose is to help Southwestern producers and communities develop new and improved markets and enterprises and to rebuild local food systems." The website is a valuable resource and contains Local Product Directories, newsletters, publications, success stories, and surveys.
http://www.swmarketingnetwork.org/

eXtension

eXtension is an Internet-based collaborative environment where Land Grant University content providers exchange objective, research-based knowledge to solve real challenges in real time. Also provides information and collaboration opportunities for businesses, and local governments. http://about.extension.org/

Funding Opportunities

Research Development Grants

The Harris School announces its Research Development Grants program for social science scholars interested in food assistance research. Grants will be awarded in amounts up to $40,000 for the 2008-2009 program. Start-up projects and projects by young and less experienced scholars will be offered grants of up to $20,000. Awards will be made to scholars who propose research including, but not limited to food assistance research in: interactions between food assistance programs and other welfare programs with respect to participation, administration, budget exposure, and the role of food assistance as a personal and fiscal stabilizer; the effects of the macroeconomic environment on the need for food assistance, level of participation, and food assistance program costs; and the well-being of current and former food assistance recipients. Visit the WRDC website or http://harrisschool.uchicago.edu/Research/funding.asp for more information. The deadline for proposals is 1 July 2008.

Small Business Innovation Research Grants – USDA

The Small Business Innovation Research program will release a request for proposals in June with an August deadline. SBIR program awards are based on the scientific and technical merit of investigator initiated ideas. The SBIR Program does not make loans and does not award grants for the purpose of helping a business get established. SBIR Phase I grants are limited to $80,000 and duration of 8 months and are open to any small business concern that meets the SBIR eligibility requirements. SBIR Phase II grants are limited to $350,000 and duration of 24 months and are only open to previous Phase I awardees. SBIR program funds are allocated in proportion to the number of proposals received. Proposals are reviewed through a confidential peer review process using outside experts from nonprofit organizations. All applicants receive verbatim copies of reviews. Estimated funding for the programs fiscal year 2008 is $19 million which will be allocated over 12 topic areas. For details see
http://www.csrees.usda.gov/funding/sbir/sbir.html

"Restoration is very expensive, and in the harsh conditions of the Great Basin, restoration efforts are effective less than half of the time." See article "Rangeland Fires and Cheatgrass: Values at Risk and Support for Preservation"

eCommerce Training *Western Style*

eCommerce Training - Sidney, MT

The WRDC has teamed up with Montana State University Cooperative Extension and the University of Idaho Cooperative Extension to present the WRDC's eCommerce – Western Style training programs to Horizons Communities' in Montana and Idaho.

Horizon Communities are a program of the Northwest Area Foundation, headquartered in St. Paul, Minnesota, to reduce poverty in rural areas of the Northwestern U.S.

Dan Clark and Mary Schmidt, who are the Horizons Communities state program directors in Montana and Idaho respectively, saw the benefits this training could bring to their Horizons Communities businesses and non-profit organizations, as well as community development practitioners.

The WRDC and Montana State University Extension are hosting their second eCommerce training in Bozeman, Montana in mid-May. The WRDC has teamed up with the University of Idaho Extension to produce the eCommerce event in the latter part of May.

The WRDC training model also encourages the hosting Cooperative Extension staff to recruit the keynote speaker and panel speakers from their local community. This allows for experienced business owners to share their stories and serves to further strengthen the entrepreneurial climate of the local community.

The intensive, interactive and hands-on, two-day program covers Planning for eCommerce, the Internet and eCommerce technology, Google tools for eCommerce, eCommerce Financial Tools, Understanding Online Marketing and Traditional Marketing. The training is highly interactive with ample opportunities for participants to fire up their laptops and get hands-on during the two days.

These eCommerce trainings are led by Eric Hawley, Associate Vice President of IT at Utah State University. "I am pleased Eric has agreed to lead the trainings for the Horizons Communities", says Jim Goodwin, WRDC Senior Program Officer, "He has a wealth of knowledge on eCommerce and the Internet. Plus he is one terrific teacher."

The WRDC training model also encourages the hosting Cooperative Extension staff to recruit the keynote speaker and panel speakers from their local community. This allows for experienced business owners to share their stories and serves to further strengthen the entrepreneurial climate of the local community.

"Thank you again for what you brought to our community," says Melissa Boyer, Project Director for Communities in Action located in Sidney, Montana, "The impact of this education will be far greater than we can measure."

For details contact the WRDC at wrdc@usu.edu.

Utah Legislature Funds War on Cheatgrass

The Utah Department of Agriculture and Food (UDAF) working with the Utah Partners for Conservation and Development (UPCD) secured major reinforcements from the Utah Legislature for the war on cheatgrass. Senate Bill 89, authored by Senator Dennis Stowell (R) Parowan, established the Invasive Species Mitigation Fund and set aside $2 million to fund range projects that will limit the size of wildfires.

The UDAF and its partners will distribute up to $2 million from the Invasive Species Mitigation Fund for projects undertaken by agencies such as the BLM, the Department of Natural Resources, the Utah Conservation Commission and 15 other state and federal agencies. Such projects will focus on mitigating risks to public safety and health, air pollution, flooding, soil erosion, the release of carbon, damage to local economies, and habitat for wildlife or livestock.

For more info on the Utah Partners for Conservation and Development, visit: www.ag.utah.gov

"Several factors have converged to cause the increase in wildfire size and significance. Two of the most important in the Great Basin are ongoing invasions of sagebrush-dominated rangelands by non-native grasses such as cheatgrass..."

See article on page two "Gauging the Acceptability of Fuels Management: A Matter of Trust."

Western U.S. Wildfire Management
See what your state's leadership is doing to address wildfires.

Alaska: http://www.state.ak.us/

Arizona: http://az.gov/webapp/portal/

California: http://www.ca.gov/state/portal/myca_homepage.jsp

Colorado: http://www.colorado.gov/

Hawaii: http://www.hawaii.gov/portal/

Idaho: http://www.state.id.us/

Montana: http://mt.gov/

Nevada: http://www.nv.gov/

New Mexico: http://www.newmexico.gov/

Oregon: http://www.oregon.gov/

Utah: http://www.utah.gov/

Washington: http://access.wa.gov/

Wyoming: http://wyoming.gov/

American Samoa: http://www.asg-gov.net/

Guam: http://www.admin.gov.gu/admin.html

Micronesia-Kolonia: http://www.fsmgov.org/

Northern Marianas: http://www.gov.mp/

A Message from WRDC's Incoming Director

Editor's Note: The WRDC is welcoming a new director, Don Albrecht, who joins the center full-time on 1 July 2008.

Don Albrecht

I am truly excited for the opportunity to serve as the Director of the Western Rural Development Center. I was born and raised in the rural west, I have spent my entire career seeking to understand and alleviate the problems and concerns of rural people, and I am deeply committed to solving these problems. For me, being the Director of the WRDC is a dream come true. I am confident the WRDC will continue to play a prominent role in improving the quality of life for rural residents.

To engender positive change, the WRDC must effectively develop partnerships with other individuals and agencies involved in rural development. I am convinced that the Regional Rural Development Centers can be effective by facilitating research and extension programs that are beyond the capacity of a single university or a single state.

"I also believe that these centers can work directly with the leaders and development specialists in rural communities."

I believe that the primary role of a Regional Center is to build multi-disciplinary and multi-state teams of researchers and extension specialists to deal with the major problems faced by rural residents and rural communities. There is no doubt the Regional Rural Development Centers can help bridge the gap between research and policy. I also believe that these centers can work directly with the leaders and development specialists in rural communities.

To accomplish the objectives described above, I envision the WRDC working as a Catalyst, a Convener, and a Conduit. As a Catalyst, I anticipate that the center will initiate research and extension programs on significant issues determined by the WRDC staff and Board of Directors. In most cases, the WRDC will then strive to build teams of researchers, extension specialists or development specialists to effectively deal with these significant issues.

As a Convener, I envision researchers and extension specialists approaching the WRDC with their ideas, and the center then working to facilitate the development of multi-state and multi-disciplinary teams. No question, such efforts will greatly increase the likelihood of success.

As a Conduit, I visualize the WRDC becoming recognized as a primary source of information for all things associated with rural development, including demographic data. Relevant and timely information will continue to be shared via newsletters and the center's website. I am convinced that ready access to information is vital to the development of successful rural development policy.

As the Director of the WRDC, I am committed to making a positive difference. I am committed to working hard, and to effectively partnering with researchers, extension specialists, community leaders, and anyone who wants to engage in furthering quality livelihoods for the residents of rural America. I look forward to meeting and working with many of you. I truly believe that together there is no limit to the positive things that we can accomplish for our rural communities.

2008 WRDC Board of Directors

Noelle Cockett, Chair
Utah State University

Bettye Atkinson
Economic Development Agency

Jim Christenson
University of Arizona

Karen Grillo
Nevada Association of Counties

Robert Hadfield
Nevada Association of Counties

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Sally Maggard
USDA-CSREES
(Federal Liaison)

John Allen
(Outgoing WRDC Director)

Don Albrecht
(Incoming WRDC Director)

Chuck Gay
Utah State University
(Serves in chair's absence)

Mark your calendar!

2008 National River Rally
2-5 May 2008
Huron, Ohio
www.rivernetwork.org/rally
River Network's National River Rally 2008 will help grassroots groups, tribes and agencies harness the power of citizen involvement to protect rivers and build healthier communities and watersheds. The River Rally will bring together hundreds of friends of rivers, water keepers, monitors, watchdogs, stewards, guardians and others involved in watershed protection and restoration.

Southwest Marketing Network's 6th Annual Conference
5-7 May 2008
Santa Fe, New Mexico
http://www.swmarketingnetwork.org/index.php/SWMN_Conferences
This conference will facilitate these goals and bring together regional small business and marketing practitioners.

17th Annual Desert Horticulture Conference
16 May 2008
Tucson, Arizona
http://cals.arizona.edu/deserthort/
The premier annual conference for all members of the southwest green industry: landscape architects, designers, growers, retailers, contractors, maintenance personnel, suppliers, and educators. Presenting timely and research-based information relevant for designing, building, maintaining, and producing plants for urban landscapes in the arid Southwest. Four concurrent sessions include Arboriculture, Hot Topics/Green, Design, and Maintenance (Spanish translation available in Maintenance session). Attendees can earn continuing education units for various professional organizations.

AEO's Rural Summit
20 May 2008
Anaheim, California
http://www.microenterpriseworks.org/index.asp?bid=3002
The summit is specifically designed to build networks among people working in microenterprise development, Buy Local efforts, Main Street revitalization, rural economic development, green business initiatives, sustainable agriculture, and more. "Join us as we take this first step in engaging rural activists for the betterment of our rural communities, identifying intersections and opportunities for collaboration, and enhancing our mutual work."

6th Biennial Natural Resource Extension Professionals Conference
20-23 May 2008
Madison, Wisconsin
http://www.anrep.org/conferences/2008
Leopold's Legacy: Extension's Response to a Changing World—"The land ethic at work today," will be held at the Monona Terrace Convention Center in Madison, Wisconsin.

Urbanization of Irrigated Land and Water Transfers
28-31 May 2008
Scottsdale, Arizona
http://www.uscid.org/08urban.html
Urbanization is a fact of life for many irrigation districts. Some have been impacted for many years; others are just beginning to face the challenge. As a result, irrigation districts faced with encroaching urbanization are learning to change the way they do business. The Conference will focus on water transfers, an issue related to urbanization, but also an issue affecting water districts seeking to augment their water supplies in the face of increasing competition. The Conference will provide an ideal forum for water districts to share their experiences and learn from each other. The Conference goal is to bring together many water resource professionals with experience and interest in technical, management and policy issues regarding urbanization and water transfers.

14th Annual International Symposium on Society and Resource Management (ISSRM)
10-14 June 2008
Burlington, Vermont
http://www.issrm2008.org/
People and Place: Linking Culture and Nature. The ISSRM symposium is the largest international meeting of social scientists who focus on environmental and natural resource issues. This year's sub-themes include the human dimensions of environment and natural resource issues; the broad array of social science disciplines and related fields of study; and the interdisciplinary, cooperative, and collaborative character of research and management.

40th Annual International Community Development Society Conference
22-25 June 2008
Saskatoon, Saskatchewan Canada
http://www.comm-dev.org/
Conversation, Collaboration, and Democracy: Creative Community Engagement
A four day event in Saskatoon Saskatchewan, this conference will bring together practitioners and academics, researchers and citizens to discuss research, activities and approaches from both international and local perspectives. In addition to dynamic presenters, the local committee has organized networking events and mobile workshops which will allow you to experience all that this province has to offer.

Living on the Land Curriculum Training

22-23 July 2008
Bozeman, Montana
AND
30 September – 1 October 2008
Albuquerque, New Mexico
donaldsons@unce.unr.edu

This single powerful resource provides everything you'll need to get your small acreage education program started. The curriculum includes an instructor's guide, lesson plans, evaluation tools, and individual PowerPoint presentations with instructor notes. The PowerPoint presentations consist of lessons on goal setting, soil, water, plants and animals, as well as new material on reducing the threat of wildfire, marketing and economics of small-acreage enterprises, and the whole farms approach. Attendees will receive a printed copy of the curriculum and an accompanying CD. We have a limited number of scholarships available to help defray the costs of attending the workshop. Travel scholarships of up to $250 will be awarded on an "as-needed" basis. If you'd like to request a scholarship, please complete the relevant section of the application. The registration fee, which covers continental breakfasts, lunch each day, breaks, field trip, and all materials, is $100, and must be paid separately. You will be notified of your acceptance and travel funding.

Please submit your application by May 1 for Bozeman and June 1 for Albuquerque to be considered. Contact Sue Donaldson, donaldsons@unce.unr.edu.

71st Annual Meeting of the Rural Sociological Society

28-31 July 2008
Manchester, New Hampshire
http://www.ruralsociology.org/

Rural Sociology as Public Sociology: Past, Present, Future
At the 2008 meeting, RSS hopes to feature such issues as: Is good social science compatible with public involvement?; How does Extension sociology differ from public sociology?; What can we learn from public sociologists in different regions of the world?; What can other social scientists contribute to our conversation?; What tensions do new professionals face in academic and other job settings while practicing public sociology?; Does participatory action research jibe with public sociology, or does it offer a radical alternative?

2008 Galaxy III Conference

15-19 September 2008
Indianapolis, Indiana
https://sharepoint.agriculture.purdue.edu/ces/galaxy/default.aspx

Joint Council of Extension Professionals invites proposal submissions to present at the 2008 Galaxy III Conference, September 15-19, 2008, in Indianapolis, IN. Participants will Celebrate the Extension System: Strengths, Diversity, and Unique Qualities as they learn best practices for Cooperative Extension programs and renew their personal and professional spirit for working together across organizational and programming lines.

Managing Water in a Climate Change World: Implications for Irrigation, Drainage and Flood Control

17-20 September 2008
Portland, Oregon
http://www.uscid.org/08gcc.html

The conference will acquaint managers with the methods used by scientists to project the coming water environment, the nature of the impacts on water to be expected, and the ways in which global and regional changes affect Western irrigation drainage and flood control. It will also allow managers to share the initial responses their agencies and districts have made to the changing environment and compare those responses with ones made by others.
The conference will provide a forum for practitioners to share experiences and for researchers to present their recent results. It will also include a number of invited presentations by leading researchers on key issues in each of the four topical areas to acquaint conference participants with the latest thinking, methods and modeling results relating water and climate change.

Community Development Academy

22-26 September 2008
Excelsior Spring, Missouri
LovercampE@missouri.edu

The University of Missouri Community Development Extension Program offers a series of three courses called the Community Development Academy. Each of the three courses is an intensive, experiential, five-day course that explores ideas and develops practical skills for effectively involving and empowering local citizens and leaders in community-based efforts. Courses One and Three offered during this week.

WESTERN RURAL DEVELOPMENT CENTER
engaging the future
CONNECTING 13 WESTERN STATES AND 4 U.S. TERRITORIES

The Western Rural Development Center compiles this newsletter with submissions from university faculty, researchers, agencies and organizations from throughout the Western region. We make every attempt to provide valuable and informative items of interest to our stakeholders.

The views and opinions expressed by these agencies/organizations are not necessarily those of the WRDC. The WRDC is not responsible for the content of these submitted materials or their respective websites and their inclusion in the newsletter does not imply WRDC endorsement of that agency/organization/program.

The Western Rural Development Center (WRDC) is one of four regional centers in the U.S. funded by the USDA/CSREES to strengthen the capacity of local citizens to guide the future of their rural communities. Each center links the research and extension capacity of the land grant universities with local decision makers to address a wide range of rural development issues.

The WRDC also receives substantial support from Utah State University through Cooperative Extension; the Agricultural Experiment Station; the College of Humanities, Arts and Social Sciences and the College of Natural Resources.

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